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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/552,310	12/05/2006	Heike Hattendorf	F-8856	6640
28107 7590 05/13/2009 JORDAN AND HAMBURG LLP 122 EAST 42ND STREET SUITE 4000 NEW YORK, NY 10168				
EXAMINER				
VAN OUDENAREN, SARAH A				
ART UNIT		PAPER NUMBER		
1793				
MAIL DATE		DELIVERY MODE		
05/13/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/552,310

**Applicant(s)**

HATTENDORF ET AL.

**Examiner**

SARAH VAN OUDENAREN

**Art Unit**

1793

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 February 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 43-51 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 43-51 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/CDC)
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 46, 50, and 51 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 46, the claim recites an intermediate/final product relationship. It is unclear as to whether applicant is intending to claim the alloy before annealing or after annealing. Examiner takes the position that the alloy is being claimed before annealing.

Regarding claims 50 and 51, it is unclear as to whether applicant intends for 50 and 51 to be a further limitation of the component as discussed in claim 49 or if applicant intends to broadly claim a catalytic converter and a conductor, respectively, within a Diesel or two-stroke engine. Examiner takes the position that claims 50 and 51 were meant to depend from claim 49 and thus have all limitations of 49.

***Claim Rejections - 35 USC § 102/103***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 43-47 are rejected under 35 U.S.C. 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Shimizu et al (US 5,228,932).

Shimizu teaches a Fe-Cr-Al alloy having excellent oxidation resistance. The alloy comprises 1-10 wt% Al (col 8, lines 62-63), 10-28 wt% Cr (col 8, line 40), 0.5 wt% or less Si (col 9, lines 14-15). Shimizu also teaches the alloy comprising less than 0.5 wt% Y, less than 0.3 wt% Hf (col 9, lines 45-50), 0.01-1 wt% Zr (col 3, lines 60-61). Shimizu teaches the alloy being used as a catalytic substrate foil for an exhaust gas purifying catalytic converter (col 2, lines 35-45). It is noted that the limitations of the claim recite only a maximum and therefore it is assumed that the minimum can be zero, so all elements are not needed to meet the limitations of the claim.

In the alternative, Shimizu and the claims differ in that Shimizu does not teach the exact same proportions as recited in the instant claims.

However, one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because the compositional proportions taught by Shimizu overlap the instantly claimed proportions and therefore are considered to establish a prima facie case of obviousness. It would have been obvious to one of ordinary skill in the art to select any portion of the disclosed ranges

including the instantly claimed ranges from the ranges disclosed in the prior art reference, particularly in view of the fact that;

"The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages", In re Peterson 65 USPQ2d 1379 (CAFC 2003).

Also, In re Geisler 43 USPQ2d 1365 (Fed. Cir. 1997); In re Woodruff, 16 USPQ2d 1934 (CCPA 1976); In re Malagari, 182 USPQ 549, 553 (CCPA 1974) and MPEP 2144.05.

Regarding claims 44-45 and 47, the above ranges overlap those of the instant claims. And in the alternative, Shimizu and the claims differ in that Shimizu does not teach the exact same proportions as recited in the instant claims.

However, one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because the compositional proportions taught by Shimizu overlap the instantly claimed proportions and therefore are considered to establish a prima facie case of obviousness. It would have been obvious to one of ordinary skill in the art to select any portion of the disclosed ranges including the instantly claimed ranges from the ranges disclosed in the prior art reference, particularly in view of the fact that;

"The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages", In re Peterson 65 USPQ2d 1379 (CAFC 2003).

Also, In re Geisler 43 USPQ2d 1365 (Fed. Cir. 1997); In re Woodruff, 16 USPQ2d 1934 (CCPA 1976); In re Malagari, 182 USPQ 549, 553 (CCPA 1974) and MPEP 2144.05.

Regarding claim 46, Shimizu teaches a thickness of 50 $\mu$ m (col 3, line 20). Shimizu teaches a component comprising the alloy taught above. While it is noted that certain claims are product-by-process and incorporate the same process steps as described in Group II, a product defined by the process by which it can be made is still a product claim (*In re Bridgeford*, 149 USPQ 55 (CCPA 1966)) and can be restricted from the process if the examiner can demonstrate that the product as claimed can be made by another materially different process such as the alternative process described above (*In re Brown*, 173 USPQ 685, *In re Fessman*, 180 USPQ 324).

***Claim Rejections - 35 USC § 103***

Claims 48 and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimizu et al (US 5,228,932) as applied to claims 43-45 above, and further in view of Aggen et al (US 4,414,023).

Shimizu teaches a Fe-Cr-Al alloy having excellent oxidation resistance as discussed above.

Shimizu does not explicitly teach a method for making the foil.

Aggen teaches a ferritic stainless steel alloy comprising 3-8 wt% Al, 8-25 wt% Cr, 0-4 wt% Si (col 3, lines 15-25). Tables I and II (col 9-10 and 11-14) teach the addition of a stabilizer in the range of 0.003-0.37 wt% Zr. Aggen teaches preparing a melt of the alloy and casting the melt into ingots, bars, strips, or sheets. It can then be hot and/or

cold rolled (col 7, lines 40-55). Aggen also teaches annealing at various points throughout the preparation (col 8, lines 35-40).

It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the method of Aggen with the alloy foil of Shimizu as they are similar products and it would have therefore been obvious to utilize a similar method of making.

Regarding claim 51, Aggen teaches the alloy being used for electrical resisting heating elements (col 6, lines 30-40). The limitation of "for electrical preheating of exhaust cleaning systems" is considered intended use.

It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the product of Shimizu for the use of Aggen insofar as the products of Shimizu and Aggen are similar and would therefore have the ability to be used in a similar manner.

Claims 49-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimizu et al (US 5,228,932).

Shimizu teaches a Fe-Cr-Al alloy having excellent oxidation resistance as discussed above. Shimizu teaches the alloy being used as a catalytic substrate for an exhaust gas purifying catalytic converter used in automobiles (col 1, lines 9-17). Shimizu does not explicitly teach the component being used in a diesel or two-stroke engine. It would have been obvious to one of ordinary skill in the art at the time of the invention to use the alloy and component of Shimizu in an engine, such as diesel and two-stroke engines, which utilizes catalytic converters.

Regarding claim 50, Shimizu teaches the alloy being used as a catalytic substrate foil for an exhaust gas purifying catalytic converter (col 2, lines 35-45).

### ***Response to Arguments***

Applicant's arguments filed 2/12/2009 have been fully considered but they are not persuasive. Applicant argues that the narrow ranges of the instant claims teach away from the ranges taught by Shimizu. Shimizu teaches a range which encompasses that of the instant claims, or overlaps at least a portion of the range as shown above in the 102/103 rejection over Shimizu. Regarding applicant's argument that Shimizu does not teach P and S, examiner agrees, however, it is noted that the limitations of the claim recite only a maximum and therefore it is assumed that the minimum can be zero, so all elements are not needed to meet the limitations of the claim.

Applicant's amendments have sufficiently overcome the 102 rejection over Aggen; however a new 103 rejection over Shimizu in view of Aggen is set forth above as necessitated by applicant's amendments.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within



TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SARAH VAN OUDENAREN whose telephone number is (571)270-5838. The examiner can normally be reached on Monday-Thursday, 9:00-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Melvin Curtis Mayes can be reached on 571-272-1234. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SVO  
April 25, 2009

/Melvin Curtis Mayes/  
Supervisory Patent Examiner, Art Unit 1793